

?jp60010774/pn

1/1 DWPX - (C) Thomson Derwent
AN - 1985-053464 [09]
TI - Reduced carrier transient time semiconductor device - forms spike
barrier in valance band on hetero-junction surface between emitter
and base **NoAbstract Dwg 2/4**
DC - U12
PA - (FUIT) FUJITSU LTD
PN - JP60010774 A 19850119 DW1985-09 7p *
AP: 1983JP-0119080 19830630
PR - 1983JP-0119080 19830630

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 60-010774

(43)Date of publication of application : 19.01.1985

(51)Int.Cl.

H01L 29/72

H01L 29/20

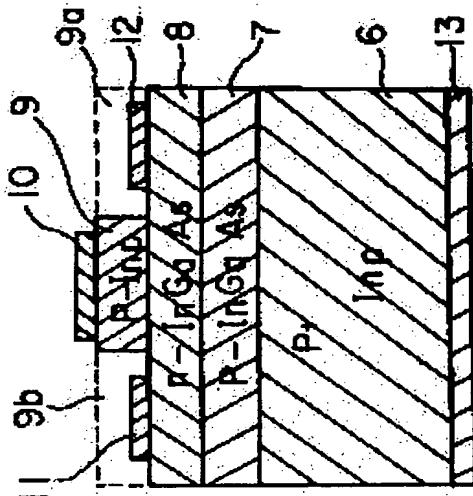
(21)Application number : 58-119080

(71)Applicant : FUJITSU LTD

(22)Date of filing : 30.06.1983

(72)Inventor : YOKOYAMA NAOKI

(54) SEMICONDUCTOR DEVICE



(57)Abstract:

PURPOSE: To inject holes of high speed to a base, and to shorten the transient time of a small number of carriers by forming spiky barriers to a valence band in an emitter-base junction section and passing the barriers through holes, mobility thereof is originally low.

CONSTITUTION: A first layer p type InGaAs layer 7 is formed on an InP p+ substrate 6, and an n type InGaAs layer 8 is formed on the p type -InGaAs layer and a p type InP layer 9 further on the layer 8. AuGe/Au electrodes 11, 12 as base electrodes are formed on the second layer n-InGaAs layer 8 through etchings 9a, 9b up to the second layer n type InGaAs layer while leaving an emitter region in the third layer InP layer. Ohmic contacts are formed through alloyings to form bases, Au/Zn/Au electrodes 10, 13 are shaped to the third layer p type InP layer 9 and the back of a p+ type InP 6, and emitter and collector electrodes are formed through the making of ohmics. Accordingly, a p-n-p hetero-junction bipolar transistor is formed.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of
rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office